
CHAPTER 11: RESIDENTIAL FACILITIES

1101 General

1101.1 Scope. Every residential *facility* containing *dwelling units* shall comply with the applicable provisions of Chapters 2 through 10 and the applicable provisions of this chapter.

1102 Accessible Dwelling Units

1102.1 General. *Accessible dwelling units* shall comply with 1102.

1102.2 Primary Entrance. The primary *entrance* to an *accessible dwelling unit* shall be located on an *accessible route* from *accessible common use* or *public use* areas. The primary *entrance* shall not be to a bedroom.

1102.3 Accessible Route. *Accessible routes* within *accessible dwelling units* shall comply with 1102.3.

EXCEPTIONS: 1. Exterior *spaces* less than 30 inches (760 mm) in depth or width shall comply with 1102.3.1, 1102.3.3, 302 and 303.

2. Unfinished attics and unfinished basements shall not be required to comply with this section.

1102.3.1 Location. At least one *accessible route* shall connect all *spaces* and *elements* which are a part of the *dwelling unit*. Where only one *accessible route* is provided, it shall not pass through restrooms, closets or similar *spaces*.

1102.3.2 Wheelchair Turning Space. All rooms served by an *accessible route* shall provide a *wheelchair turning space* complying with 304.

1102.3.3 Components. *Accessible routes* shall consist of one or more of the following *elements*: floor or *ground surfaces* with a slope not steeper than 1:20, *ramps*, elevators, and *wheelchair* (platform) lifts.

1102.4 Walking Surfaces. Walking surfaces that are part of an *accessible route* shall comply with 403.

1102.5 Doors and Doorways. The primary *entrance* door to the *dwelling unit*, and all other doorways intended for user passage, shall comply with 404.

Advisory 1102.5

In addition to the requirements for *accessible dwelling units*, at least one *entrance* door to each *dwelling unit* that is not required by this part to be *accessible* should have a 32 inch (815 mm) clear opening. In *inaccessible dwelling units*, interior doors that are intended for user passage should provide a nominal 32-inch clear opening. Where units are not required to be *accessible*, a 34-inch door provides an acceptable nominal 32-inch clear opening.

1102.6 Ramps. *Ramps* shall comply with 405.

1102.7 Private Residence Elevators. Private residence elevators shall comply with 1102.7 and with ASME/ANSI A17.1.

EXCEPTION: Elevators complying with 407 shall be permitted.

1102.7.1 Automatic Operation. Elevator operation shall be automatic. Each car shall automatically stop at a floor landing within a tolerance of 1/2 inch (13 mm) under rated loading to zero loading conditions.

1102.7.2 Call Buttons. Call buttons at elevator landings shall comply with 309.3. Call buttons shall be 3/4 inch (19 mm) minimum in the smallest dimension.

1102.7.3 Doors and Gates. Elevator car and hoistway doors and gates shall comply with 404, except that the maneuvering clearances required by 404.2.4.1 for approaches to the push side of swinging doors shall not apply. Elevator car doors and gates shall be power operated. For elevators with a car that has more than one opening, the hoistway doors and gates shall be permitted to be of the manual-open, self-close type. Elevators with a single opening car shall have low-energy power-operated hoistway doors and gates. Power operated doors and gates shall comply with ANSI/BHMA A156.19 and shall remain open for 20 seconds minimum when activated.

1102.7.4 Inside Dimensions of Elevator Cars. Elevator cars shall provide a clear floor *space* complying with 305. Car gates or doors shall be positioned at the narrow end of the clear floor *space*. The clearance between the car platform sill and the edge of any hoistway landing shall be 1-1/4 inches (32 mm) maximum.

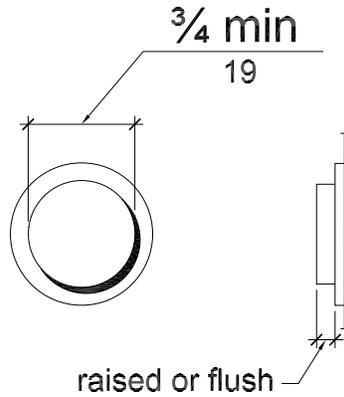
1102.7.5 Floor Surfaces. Floor surfaces in elevator cars shall comply with 302 and 303.

1102.7.6 Illumination Levels. The level of illumination at the car controls, platform, and car threshold and landing sill shall be 5 footcandles (54 lux) minimum.

1102.7.7 Car Controls. Elevator car controls shall comply with 1102.7.7.

1102.7.7.1 Buttons. Control buttons shall be 3/4 inch (19 mm) minimum in their smallest dimension. Control buttons shall be raised or flush.

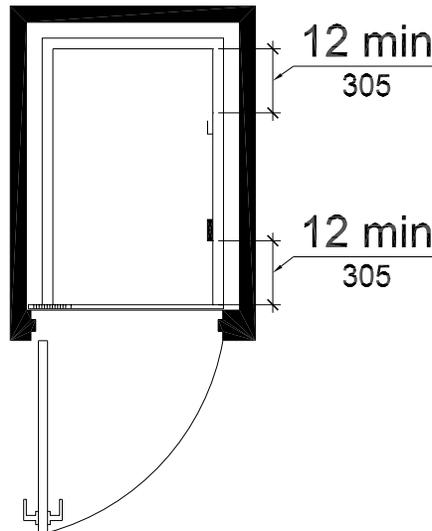
Figure 1102.7.7.1



1102.7.7.2 Height. Buttons with floor designations shall comply with 309.3.

1102.7.7.3 Location. Controls shall be on a side wall, 12 inches (305 mm) minimum from any adjacent wall.

Figure 1102.7.7.3



1102.7.8 Emergency Communications. A telephone and emergency signal device shall be provided in the car. The telephone and emergency signaling device shall comply with 309.3. If the device is in a closed compartment, the compartment door hardware shall comply with 309. The telephone cord shall be 29 inches (735 mm) long minimum.

1102.8 Wheelchair Lifts. *Wheelchair* (platform) lifts shall comply with ASME/ANSI A17.1 and with 408.

1102.9 Operable Parts. Lighting controls, electrical switches and receptacles, environmental controls, appliance controls, plumbing fixture controls, and user controls for security or intercom systems shall comply with 309.

EXCEPTIONS: 1. Electrical receptacles serving a dedicated use shall be not be required to comply with 309.

2. A single outlet shall be permitted to be inaccessible where all of the following conditions are met:

(a) the outlet is above a length of countertop that is uninterrupted by a sink or appliance;

(b) at least one receptacle complying with 1102.9 is provided for that length of countertop; and

(c) all other receptacles provided for that length of countertop comply with 1102.9.

3. Floor electrical receptacles shall be permitted to be inaccessible.

4. HVAC diffusers shall be permitted to be inaccessible.

5. Controls mounted on range hoods shall be permitted to be inaccessible if *accessible* redundant controls are provided.

6. Ceiling fan mounted controls shall be permitted to be inaccessible.

1102.10 Laundry Equipment. Washing machines and clothes dryers shall comply with 611.

1102.11 Toilet and Bathing Facilities. All toilet *facilities* and bathing *facilities* shall comply with 1102.11.

1102.11.1 Doors. Doors shall not swing into the clear floor or ground *space* or clearance for any fixture.

EXCEPTION: Where a clear floor or ground *space* complying with 305.3 is provided within the room, beyond the arc of the door swing, the door shall be permitted to swing into clear floor or ground *space* or clearance for fixtures.

1102.11.2 Overlap. Clear floor or ground *spaces*, clearances, and *wheelchair* turning *spaces* shall be permitted to overlap.

1102.11.3 Lavatory. Lavatories shall comply with 606.

EXCEPTION: Cabinetry shall be permitted under the lavatory provided the following conditions are met:

(a) the cabinetry can be removed without removal or replacement of the lavatory;

(b) the finish floor extends under the cabinetry; and

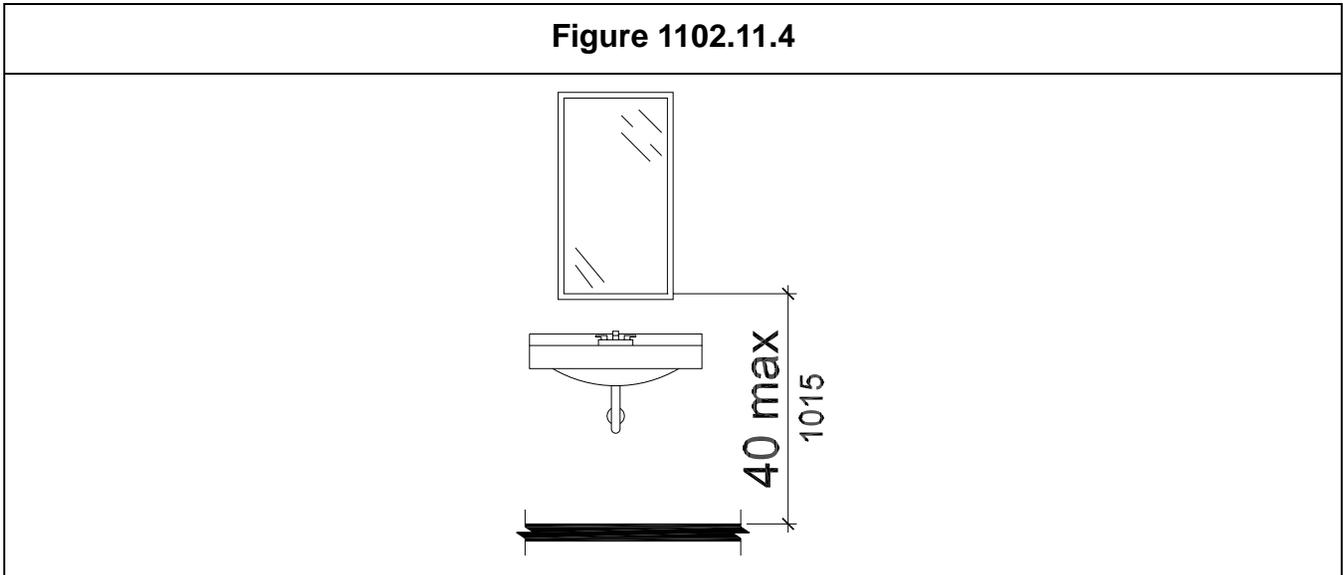
(c) the walls behind and surrounding cabinetry are finished.

Advisory 1102.11.3 Exception

Walls surrounding cabinetry must be finished so that when the front facing cabinet is removed, no additional finishing work is required.

1102.11.4 Mirrors. Mirrors above lavatories shall have the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor or ground.

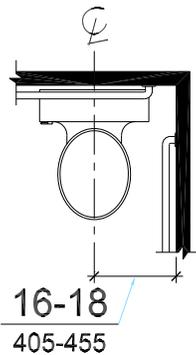
Figure 1102.11.4



1102.11.5 Water Closet. Water closets shall comply with 1102.11.5.

1102.11.5.1 Location. The water closet shall be positioned with a wall to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the side wall.

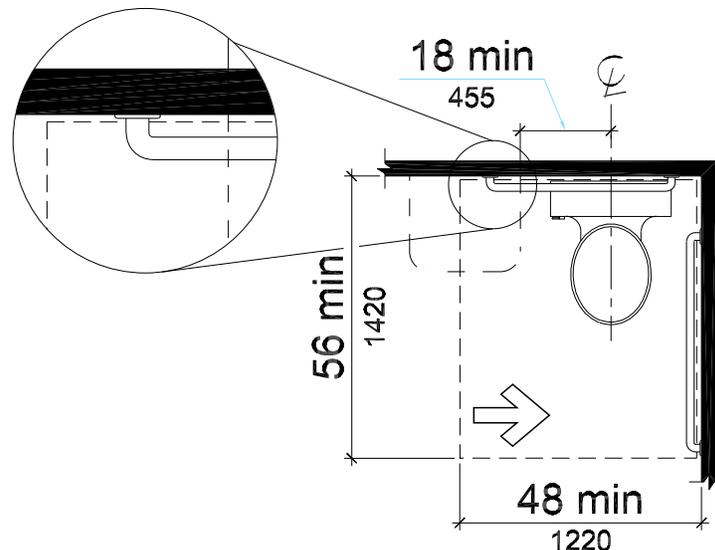
Figure 1102.11.5.1



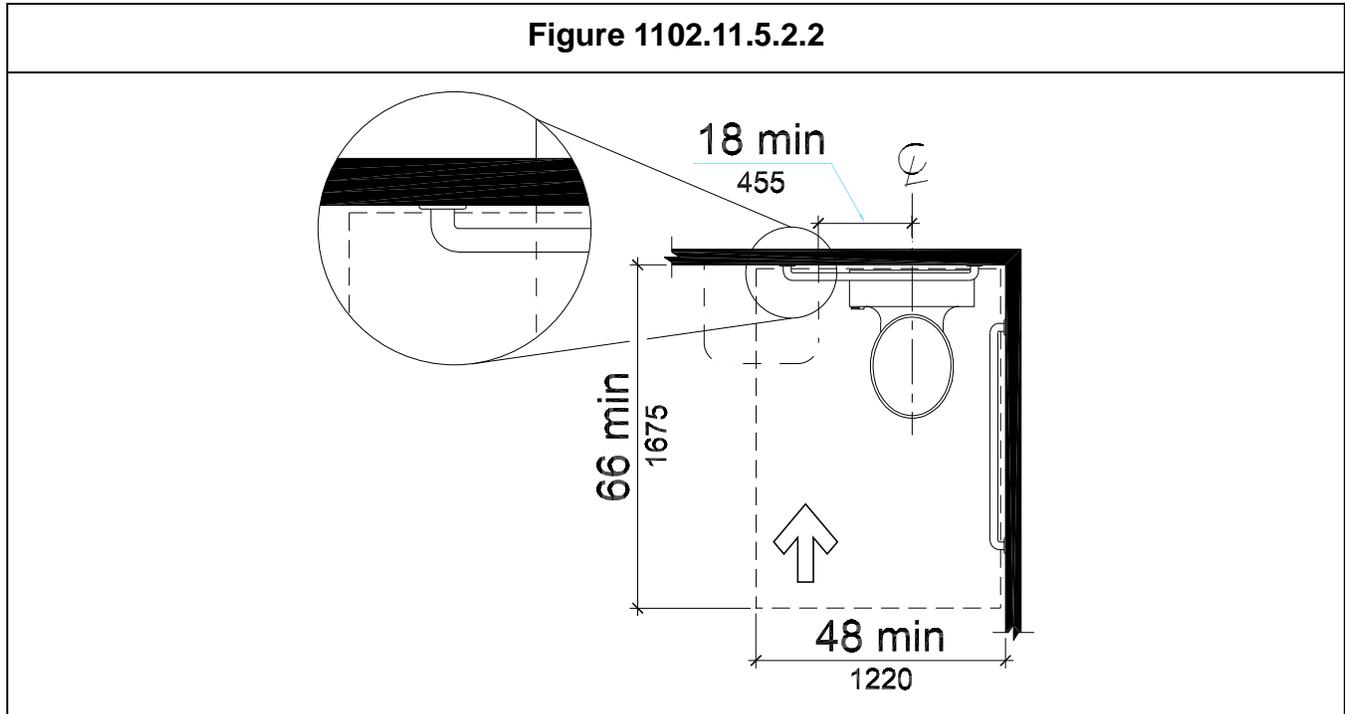
1102.11.5.2 Clearance. Clearance around the water closet shall comply with 1102.11.5.2.

1102.11.5.2.1 Parallel Approach. Where only a parallel approach is provided to the water closet, the clearance shall be 56 inches (1420 mm) minimum, measured perpendicular from the rear wall, and 48 inches (1220 mm) minimum, measured perpendicular from the side wall. A lavatory complying with 1102.11.3 shall be permitted on the rear wall, 18 inches (455 mm) minimum from the water closet centerline.

Figure 1102.11.5.2.1



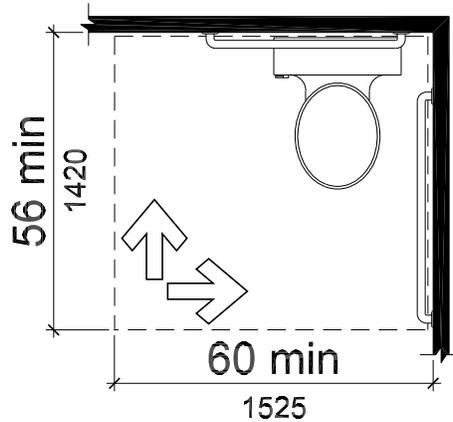
1102.11.5.2.2 Forward Approach. Where only a forward approach is provided to the water closet, the clearance shall be 66 inches (1675 mm) minimum, measured perpendicular from the rear wall, and 48 inches (1220 mm) minimum, measured perpendicular from the side wall. A lavatory complying with 1102.11.3 shall be permitted on the rear wall, 18 inches (455 mm) minimum from the water closet centerline.



1102.11.5.2.3 Parallel and Forward Approach. Where both a parallel and a forward approach are provided to the water closet, the clearance shall be 56 inches (1420 mm) minimum, measured perpendicular from the rear wall, and 60 inches (1525 mm) minimum,

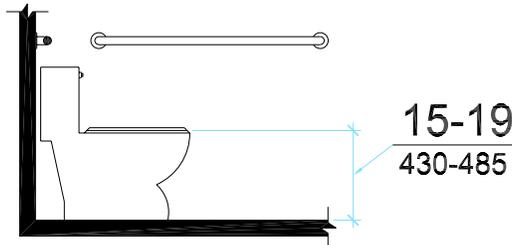
measured perpendicular from the side wall. No fixtures or obstructions, other than the water closet, shall be within the clearance.

Figure 1102.11.5.2.3



1102.11.5.3 Height. The top of the toilet seat shall be 15 inches (380 mm) minimum and 19 inches (485 mm) maximum above the floor or ground.

Figure 1102.11.5.3



1102.11.5.4 Grab Bars. Grab bars complying with 604.5 shall be provided.

EXCEPTION: Grab bars shall not be required where reinforcement has been provided in walls to permit the installation of grab bars complying with 604.5.

Advisory 1102.11.5.4 Exception

Reinforcement must be sufficient to permit the installation of rear and side wall grab bars that fully meet all accessibility requirements including, but not limited to, required length, installation height, and structural strength.

1102.11.5.5 Flush Controls. Hand operated flush controls shall comply with 1102.9.

1102.11.6 Bathtub. Bathtubs shall comply with 607.

EXCEPTIONS: 1. The removable in-tub seat required by 607.3 shall not be required.
2. Grab bars shall not be required, where reinforcement has been provided in walls to permit the installation of grab bars complying with 607.4.

1102.11.7 Shower. Showers shall comply with 608.

EXCEPTIONS: 1. A shower seat shall not be required in transfer-type showers, where reinforcement has been provided in a wall to permit the installation of a seat complying with 610.3.
2. Grab bars shall not be required, where reinforcement has been provided in walls to permit the installation of grab bars complying with 608.3.

1102.12 Kitchens. Kitchens shall comply with 1102.12.

1102.12.1 Clearance. Clearance complying with 1102.12.1.1 and 1102.12.1.2 shall be provided.

1102.12.1.1 Galley. In kitchens with counters, appliances or cabinets on two opposing sides, clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum.

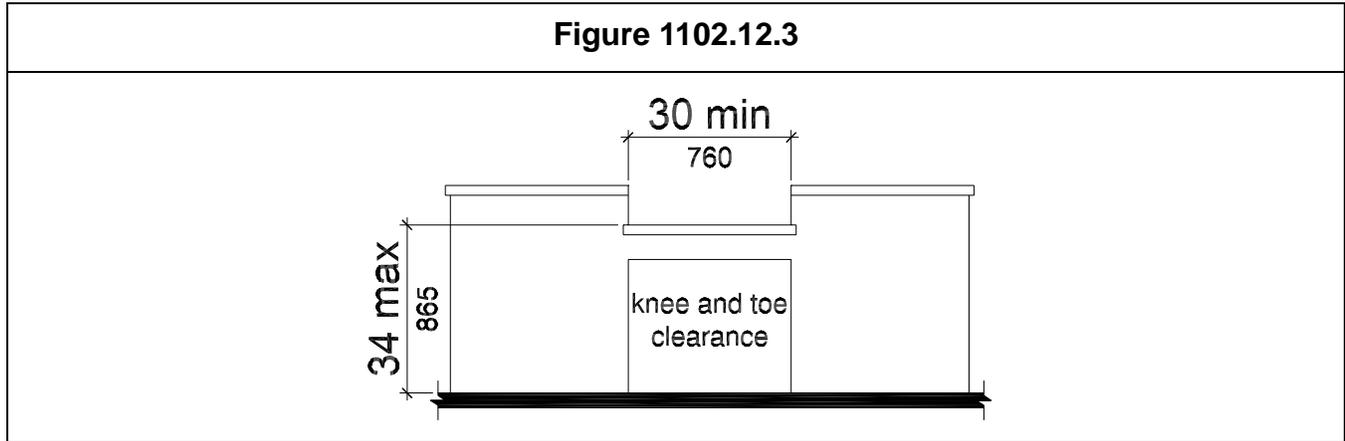
Advisory 1102.12.1.1

The 40 inches (1015 mm) minimum is measured from the furthest projecting face of all opposing base cabinets, countertops, appliances, or walls, excluding hardware.

1102.12.1.2 U-Shaped. In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.

1102.12.2 Clear Floor or Ground Space. Clear floor or ground *spaces* required by 1102.12.3 through 1102.12.6 shall comply with 305.

1102.12.3 Work Surface. At least one 30 inches (760 mm) wide minimum section of counter shall provide a work surface that complies with 1102.12.3.



1102.12.3.1 Clear Floor or Ground Space. A clear floor *space* complying with 305 positioned for a forward approach shall be provided. The clear floor or ground *space* shall be centered on the work surface. The clear floor or ground *space* shall provide knee and toe clearance complying with 306.

EXCEPTION: Cabinetry shall be permitted under the work surface, where such cabinetry can be removed without removal or replacement of the work surface, where the finish floor extends under such cabinetry, and where walls behind and surrounding cabinetry are finished.

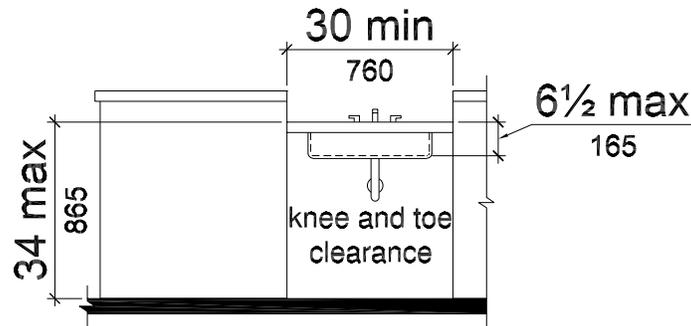
1102.12.3.2 Height. The work surface shall be 34 inches (865 mm) maximum above the floor or ground.

EXCEPTION: A counter that is adjustable to provide a work surface at variable heights 29 inches (735 mm) minimum and 36 inches (915 mm) maximum shall be permitted.

1102.12.3.3 Exposed Surfaces. There shall be no sharp or abrasive surfaces under the work surface counters.

1102.12.4 Sink. The sink and surrounding counter shall comply with 1102.12.4. The width of the sink and surrounding counter shall be 30 inches (760 mm) minimum.

Figure 1102.12.4



1102.12.4.1 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 and positioned for a forward approach shall be provided. The clear floor or ground *space* shall be centered on the sink bowl. The clear floor or ground *space* shall provide knee and toe clearance complying with 306.

EXCEPTIONS: 1. Cabinetry shall be permitted under the sink, where such cabinetry can be removed without removal or replacement of the sink, where the finish floor extends under such cabinetry, and where walls behind and surrounding cabinetry are finished.

2. Adjustable-height sinks complying with 1102.12.4.2 are not required to provide knee clearance where placed at heights below 34 inches (865 mm).

1102.12.4.2 Height. The sink and surrounding counter shall be 34 inches (865 mm) maximum above the floor or ground, measured to the higher of the fixture rim or the counter surface.

EXCEPTION: Sink and counter that is adjustable to variable heights 29 inches (735 mm) minimum and 36 inches (915 mm) maximum shall be permitted where rough-in plumbing permits connections of supply and drain pipes for sinks mounted at the height of 29 inches (735 mm).

1102.12.4.3 Sink Bowl. The depth of a sink bowl shall be 6-1/2 inches (165 mm) maximum measured from the higher of the fixture rim or the counter surface. Multiple-compartment sinks shall have at least one compartment complying with this requirement.

1102.12.4.4 Faucets. Faucets shall comply with 309.

1102.12.4.5 Exposed Pipes and Surfaces. Water supply and drain pipes under sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under sinks.

1102.12.5 Kitchen Storage. Cabinets shall have a clear floor or ground *space* complying with 305, positioned for parallel or forward approach.

1102.12.6 Appliances. Where provided, kitchen appliances shall comply with 1102.12.6.

1102.12.6.1 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 positioned for parallel or forward approach shall be provided at each kitchen appliance. Clear floor or ground *spaces* shall be permitted to overlap.

1102.12.6.2 Operable Parts. All appliance controls shall comply with 1102.9.

1102.12.6.3 Dishwasher. Clear floor or ground *space* shall be positioned adjacent to the dishwasher door. The dishwasher door, in the open position, shall not obstruct the clear floor or ground *space* for the dishwasher or the sink.

1102.12.6.4 Range or Cooktop. Where a forward approach is provided, the clear floor or ground *space* shall provide knee and toe clearance complying with 306. Where knee and toe *space* is provided, the underside of the range or cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock. The location of controls shall not require reaching across burners.

1102.12.6.5 Oven. Ovens shall have controls on front panels, to the side of the door.

1102.12.6.5.1 Side-Hinged Door Ovens. Side-hinged door ovens shall have the work surface required by 1102.12.3 positioned adjacent to the latch side of the oven door.

1102.12.6.5.2 Bottom-hinged Door Ovens. Bottom-hinged door ovens shall have the work surface required by 1102.12.3 positioned adjacent to one side of the door.

1102.12.6.6 Refrigerator/Freezer. Combination refrigerators and freezers shall have at least 50 percent of the freezer *space* 54 inches (1370 mm) maximum above the floor or ground. The clear floor or ground *space* shall be positioned for a parallel approach to the *space* dedicated to a refrigerator/freezer with the centerline of the clear floor or ground *space* offset 24 inches (610 mm) maximum from the centerline of the dedicated *space*.

1102.12.6.7 Trash Compactor. A clear floor or ground *space* complying with 305 positioned for parallel or forward approach shall be provided.

1102.13 Windows. Where glazed openings are provided in *accessible* rooms or *spaces* for operation by the occupants, at least one opening shall comply with 309. In *accessible* rooms or *spaces*, each glazed opening required to be operable by the local *administrative authority* shall comply with 309.

1102.14 Storage Facilities. Where storage *facilities* are provided, they shall comply with 1102.14.

EXCEPTION: Kitchen cabinets shall comply with 1102.12.5.

1102.14.1 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 positioned for a parallel or forward approach shall be provided at each storage *facility*.

1102.14.2 Height. A portion of the storage area of each storage *facility* shall accommodate a forward reach or side reach complying with 308.

1102.14.3 Operable Parts. *Operable parts* on storage *facilities* shall comply with 309.

1103 Dwelling Units with Accessible Communication Features

1103.1 General. *Dwelling units* required to have *accessible* communication features shall comply with 1103.

1103.2 Dwelling Unit Smoke Detection. Where provided, *dwelling unit* smoke detection shall include audible notification complying with NFPA 72.

1103.3 Building Fire Alarm System. Where a *building* fire alarm system is provided, the system wiring shall be extended to a point within the *dwelling unit* in the vicinity of the *dwelling unit* smoke detection system.

1103.4 Visual Alarm Appliances. Visible notification appliances, where provided within the *dwelling unit* as part of the *dwelling unit* smoke detection system or the *building* fire alarm system, shall comply with 1103.4.

1103.4.1 Appliance. Visual alarm appliance shall comply with NFPA 72.

1103.4.2 Activation. All visual alarm appliances provided within the *dwelling unit* for smoke detection notification shall be activated upon smoke detection. All visual alarm appliances provided within the *dwelling unit* for *building* fire alarm notification shall be activated upon activation of the *building* fire alarm in the portion of the *building* containing the *dwelling unit*.

1103.4.3 Interconnection. The same visual alarm appliances shall be permitted to provide notification of *dwelling unit* smoke detection and *building* fire alarm activation.

1103.4.4 Prohibited Use. Visual alarm appliances used to indicate *dwelling unit* smoke detection or *building* fire alarm activation shall not be used for any other purpose within the *dwelling unit*.

1103.5 Dwelling Unit Primary Entrance. Communication features shall be provided at the *dwelling unit* primary *entrance* complying with 1103.5.

1103.5.1 Notification. A hard-wired electric doorbell shall be provided. A button or switch shall be provided outside the *dwelling unit* primary *entrance*. Activation of the button or switch shall initiate an audible tone and visible signal within the *dwelling unit*. Visible doorbell signals that are located in the sleeping areas shall have controls to deactivate the signal.

1103.5.2 Identification. A means for visually identifying a visitor without opening the *dwelling unit* entry door shall be provided. Peepholes, where used, shall provide a minimum 180 degree range of view.

Advisory 1103.5.2

In doors, peepholes that include prisms clarify the image and should offer a wide-angle view of the hallway or exterior for both standing persons and *wheelchair* users. Such peepholes can be placed at a standard height and permit a view from several feet from the door.

1103.6 Site, Building or Floor Entrance. Where a system permitting voice communication between a visitor and the occupant of the *dwelling unit* is provided at a location other than the *dwelling unit* entry door, the system shall comply with 1103.6.

1103.6.1 Common Use or Public Use System Interface. The *common use* or *public use* system interface shall include the capability of supporting voice and *TTY* communication with the *dwelling unit* interface.

1103.6.2 Dwelling Unit Interface. The *dwelling unit* system interface shall include a telephone jack capable of supporting voice and *TTY* communication with the *common use* or *public use* system interface.

1103.7 Closed-Circuit Communication Systems. Where a closed-circuit communication system is provided, the *common use* or *public use* system interface shall comply with 1103.6.1, and the *dwelling unit* system interface in units required to have *accessible* communication features shall comply with 1103.6.2.